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ABSTRACT

Education is the best hope for peace and progress in the world, and because education is best given and received when infused with critical thinking, critical thinking can save the world. Some of the most serious problems facing humankind are overpopulation and famine. The problems of ethnicity, colonialism, and religion further complicate matters worldwide. From the global perspective of questioning and analyzing situations in Malaysia, Norway, and other countries, the emphasis shifts to the problems in the classrooms of the United States. From surveying urban school teachers and college professors of inner city students, the academic competencies students need to develop are reading, writing, speaking and listening, mathematics, studying, and drawing conclusions from data. The last is known as critical thinking skills and is basic to effective learning. Students need the competencies to master subject matter, need the subject matter on which to hone the competencies, and need the ability to reason to do both. Three bases develop the assertion that critical thinking can help save the world: (1) the world needs saving; (2) reasoning is at the center of effective learning; and (3) a dimension exists that will ensure education is used to solve problems in ways that recognize the worth of all men and women. The application of critical thinking to the educational process can help save the world by insuring that well-educated, critical thinking minds will be available to take on the problems not only of this century but also of the next century. (CK)

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HOW TO SAVE THE WORLD: THROUGH CRITICAL THINKING

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HOW TO SAVE THE WORLD: THROUGH CRITICAL THINKING*

The theses of this paper are that, because the problems of the world are not going to be solved through ignorance, education is man's, and woman's, best hope for peace and progress on the planet and that, because education is best given and received when infused with critical thinking, critical thinking can save the world. These two propositions are advanced here, not by reliance on information gained second hand, but on the basis of personal observations made in three quite different contexts.

First, the context of the International Association for Educational Assessment: As its name implies, it is an organization concerned with educational testing in all parts of the globe. In the course of attending its meetings, originally as a representative of my employer, the College Board, and more recently as an individual member, I have been able to visit all the continents except Antarctica and to observe at first hand the effects some of the most serious problems facing humankind as it nears the 21st Century, among them the following:

Overpopulation: The burgeoning growth of the favellas on the edges of Rio de Janiero and Sao Paulo in South

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America, the teeming masses in Cairo and Nairobi in Africa, and the milling crowds in downtown Bangkok in Asia and in Manila in the Pacific only hint at the overpopulation overtaking the world. As the land, for which read rural agricultural enterprise, becomes unable to support the increasing number of youngsters born to it, they and their parents flock to urban settings in search of sustenance and survival ... and their families and their cities grow. The answer? The obvious one, birth control. Obvious, perhaps, but terribly difficult to promote in the face of today's religious, racial, and political tensions.

I recall, for instance, the time in the 1960s when our neighbors in South America perceived U.S. promotion of birth control as a military plot to keep down the populations from which they could recruit for their armies to fight us.

Famine: One does not have to have travelled the globe to realize that famine and malnutrition are abroad in the world. What we in America have seen on television in recent years from Ethiopia and Somalia have made that clear. (It had been made clear to me a few years before that in the emaciated bodies of the yougsters who surrounded our safari wagon as we made a rest stop in rural Kenya.) But what we see on the television screen is just the tip of the iceberg, for it is a fact that more than 35,000 children die every day from malnutrition in this world of ours.

When I first heard that figure about a dozen years ago at an IAEA meeting in Perth, Australia, I could neither

believe or comprehend it. When I got back to New York City, I checked with the UN to find out it if was true. It was. And the number is, I am told, larger today. With the deaths in Ethiopia and Somalia merely drops in that bucket, I simply cannot comprehend that figure.

But if famine and overpopulation is each a problem by itself, take the two together.

In the early 1960s, a fellow vestryman of mine at church, a doctor, told me of a letter he had received from a medical school classmate. The friend had chosen to do medical missionary work in India and had been assigned to a small village. There he had discovered inordinately high mortality rates around the time of births among both infants and mothers. Because births were considered to be religious in nature, matters to be handled by duly anointed midwives, he wasn't even allowed to attend at first. In fact, it took him the better part of a year before he had gained the confidence of the community to the point where he was allowed to witness, though not take part in, an actual delivery. It was then that he came to understand the reason for the high death rates. For ceremonial religious reasons, when an umbilical chord was severed, each end was rubbed in cow dung. In time, he was able to suggest, and then have accepted, the idea that the rubbing be done symbolically. The death rate plummeted. More children and their mothers survived ... and in a couple of years there was not enough food to go around. He had inadvertently created a famine.

Soon thereafter the young missionary doctor had been transferred to another village where there was a high mortality rate from stomach problems. Having traced the cause to primitive means of human waste disposal, his problem was not how to clean up the mess but whether or not to save lives in the short run at what he knew would be the price of overpopulation and famine in the long run.

One doesn't have to travel the world or watch televison to realize that young people are starving. Just look look at the heartrending appeals on behalf of the world's undernourished children which arrive daily in the mail! Now think for a moment what would happen if all those appealing agencies were successful and all the children survived and were added to the numbers resulting from continuing uncontrolled births. If the world is unable to feed today's population, just think of the famine that would result from that circumstance,

My question of you then is this: What would you have advised the young missionary doctor in India to do? What should you do about those appeals for money to buy food for starving children?

Or take the problems of ethnicity, colonialism, and religion. They are complicating matters all over the world. In South Africa, for instance, the tensions between Dutch and English colonial legacies complicate the tribal rivalries that existed before the colonists came. All over that continent, artificial boundaries set up by colonial

European powers, created countries peopled by rival tribes And in Europe itself, in what used to be Yugoslavia, an artificial creation of the victors in the war to end all wars, the historic tensions among Serbs and Croats, Christians and Muslims, have only recently again left its citizens and the world at a loss what to do.

"Ethnic cleansing," the rooting out of the Muslims in Bosnia, is, after all, simply a new expression for an old practice that modern man experienced most dramatically in "The Holocaust." By itself, the phrase is misleading. Ethnicity has become a good thing in the United States, and is cleansing always has been. But when used together their combined connotation is bad, because, in the ethnic melting pot that is the United States, the great majority of us believe in integration, in ethnic mixing not cleansing --- or do we? At the extremes, the Ku Kux Klan would wash out the blacks and some black muslim movements would banish whites from their black enclaves. But whether we support ethnic mixing or not, we do believe in democracy and appear also to believe further that democracy is ... that freedom, liberty, and the pursuit of happiness are ... the right of every person in the world.

In my travels, I saw the impulse for ethnic cleansing at work in Malaysia, where the effort to replace English with Malay as the language of instruction in the schools reflected a national commitment to Muslim dominance. I saw it again in Norway, during an economic downturn, when

resentment against Pakistani imported to do menial labor during good times was being expressed by young unemployed Norwegians. I have witnessed it next door in Canada, where the French Canadians in the province of Quebec try from time to time to separate themselves from the rest of their English-dominated nation. And I saw the religious tension between Hindus and Muslims, so obvious today in India, reflected in the attitude of the rest of Muslim Indonesia toward that nation's predominantly Hindu island of Bali.

In ethnically cleansed nations such as local Christians want Bosnia to be or in a religiously controlled country such as Malaysia, will American style democracy work? In such instances, does separation of church and state make sense? Or, in another vein, what do you say to today';s generation of unemployed Norwegians in defense of the the Pakistani their forebears imported? Or to our French Canadian neighbors? Or, for that matter, what right, or responsibility, do we as Americans have to tell the people of any other nation how to run their countries?

It was questions like these that assailed me as I had my chances to observe at first hand the effects of only a very few of the problems facing the world at the end of the 20th Century ... terribly complex and complicated problems ... problems that I assert cannot be solved by ignorance. Each of the full range of questions will require the most careful thought and analysis. Finding and living with the answers to them will require the minds of highly educated

people.

Having now dealt with that assertion, let me shift perspectives ... from the global scene to the classrooms of the United States. Although my view from there is based on limited personal experience (I taught high school algebra for a half dozen years in the early 1960s), I did have the advantage of seeing the problems of education, vicariously for more than 30 years, from the perspectives of classroom teachers from all parts of the country.

The younger among you may not recall that national average SAT scores went down dramatically from 1963 to 1975 (and have remained pretty much stagnant ever since) but they did (and have). In due course, the College Board and ETS appointed a high-powered panel to figure out why the scores had declined. It determined that about half the change was due to shifts in the populations taking the test. Civil rights was or were working. The causes of the other half were harder to pinpoint but the panel did become convinced that some significant part of the shift was due to lower academic standards in the schools and urged the College Board to do what it could to raise those standards around the point of transition from secondary school to college.

That task, of course, required that we determine what those standards ought to be. We came at that assignment from two directions. In one, we involved the classroom teachers who help make up the Achievement Tests used primarily by selective colleges. They concluded that

students going on to college should have studied six subjects: English, math, social studies, science, foreign, language, and, to everyone's surprise, the arts. Coming at the task from the other direction, we went to teachers in urban schools across the country and to college professors who were working with inner city students and asked both groups what learning skills, what academic competencies, students going on to college should have developed. Not surprisingly, they suggested that those competencies should include reading, writing, speaking and listening, doing math, and studying. But the sixth one turned out to be a surprise. Let me explain.

At a meeting of the College Board's Advisory Committee on Minority Affairs, the only majority person on the committee, John Monro, the Dean of Harvard College who, in the mid-1960s, had resigned that position to teach freshman English at predominantly black Miles College in Birmingham, Alabama, used some essays his students had written in order to advance his belief that there was another important competency that entering college student should have. He called it "drawing conclusions from data" and employed the essays to make his point. The assignment with which they dealt was to write about some tables he had given them showing population shifts among ethnic groups in selected states over time. (They showed the movement of blacks from the rural south to the industrial north.) Some of the essays were good, some bad, some in between. John's point

was that the better ones demonstrated that ability to draw conclusions from data.

His fellow panelists agreed and "drawing conclusions from data" joined reading, writing, speaking and listening, doing math and studying as one of the academic competencies suggested for consideration by those inner city school teachers and college professors. In each one of the cities, at each one of the "dialogues" as we called them, without any information as to what happened elsewhere, the same course of events unfolded. The participants endorsed John's proposition in principle, argued for a while about whether it belonged to the field of English because of the writing assignment or to the mathematicians because of the statistics, and ended up coming to the conclusion that it was broader than both and should be called "reasoning," the fourth "R."

That is when I got interested in this then, to me, new-fangled concept called "critical thinking" and started coming to these meetings at Sonoma. ... for I, like the philosophers and later the cognitive psychologists who developed the idea, and like the practicing teachers who espoused "reasoning" as a basic academic competency, believe that students learn more effectively when they are given the opportunity to "think" about the subjects they are studying ... more effectively, that is, than when they are treated like sponges programmed simply to soak up what their teachers tell them.

And, having come to most of these conferences at Sonoma over the past ten years, I am more convinced than ever that reasoning, which is part of critical thinking, is basic to effective learning.

In any event, we got those achievement test examiners and those inner city folk together at what turned out to be an "academic Woodstock" in St. Louis in 1981. They agreed in the end that all students going on to college should have studied those six basic academic subjects (English, math, social studies, science, foreign language, and the arts) and have developed those six basic academic competencies (reading, writing, speaking and listening, doing math, studying, and reasoning). Their consensus was first articulated in Academic Preparation for College: What Students Need to Know and Be Able to Do, a publication that familiarly came to be known as "The Green Book" with over a half a million copies now in circulation ... a consensus subsequently more fully explicated in six subject specific volumes known as "The Rainbow Series," each with a chapter relating reasoning explicitly to its academic subject ... a relationship most recently given even more detailed treatment in the College Board's "Thinking Series."

At the heart of this evolution, from the very outset with the publication of "The Green Book" through the latest addition to the "Thinking Series," is the recognition that reasoning ... thinking ... is at the heart of learning ... is basic to the mastery of subject matter and, at the same

time, to the development of the other basic academic competencies. In other words, students need the competencies to master subject matter, need the subject matter on which to hone the competencies, and need the ability to reason to do both.

That line of reasoning (sic), explains the second of the three bases from which I arrive at my opening assertion that critical thinking can help save the world. The first, you will recall, had to do with the problems of the world ... with why the world needs saving. The second, just explained, had to do with the classrooms of our schools ... with why reasoning is at the heart of effective learning. The third setting in which I come to my conclusion is the chapel at West Virginia Wesleyan College. There, in 1984, I delivered a convocation address. Its opening assertion will sound familiar. It was that, because the problems of the world are not going to be solved in ignorance, education is man's best rational hope for peace and progress in the world. Unfamiliar to you at this point should be the appearance of the word "rational" before "hope" ... "man's best <u>rational</u> hope for peace and progress."

To paraphrase what I explained then: Education - knowledge and the ability to use it - education alone won't solve the world's problems. It is necessary to their solution but not sufficient. There has to be another dimension ... a dimension based on faith and belief ... faith in mankind ... belief in something beyond self ... a

dimension that will ensure that education is used to solve problems that are economic and social, political and ecological, in ways that recognize the worth of all men and women, not just a few..

It is that dimension which, for me, carries critical thinking beyond reasoning ... the dimension over which scholars in the field of critical thinking differ ... differ in degree but not in kind ... and do so in ways that keep the concept vital and alive. And it is the dimension that permitted me to leave out the word "rational" in the opening assertion of this paper.

To recapitulate: On the basis of personal experience, I explored the complexity of some of the more serious problems facing the world at the end of the Twentieth Century and argued that their solution will require the best minds that education can produce. I then explained the basis for my belief that education is best given and received when it involves the basic academic competency called "reasoning" but went on to point out that education given and received without reference to human values will not alone be enough to deal with those more pressing problems facing mankind today. Because critical thinking supplies that dimension, I can comfortably conclude with the observation with which I started: that the application of critical thinking to the educational process can help save the world by insuring that well-educated, critical thinking minds will be available to take on the problems not only of this century but the next.